

# Using Hospital Inpatient Discharge Data for Quality Improvement and Statewide Surveillance: AHRQ Inpatient Quality Indicators

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## Introduction

Hospital administrative data provide an accessible database for public health measures of healthcare quality. This poster presents statewide findings for Utah inpatients in 1999-2003 using the Agency for Healthcare Research and Quality Inpatient Quality Indicator (AHRQ IQI) SAS software, Version 2.1, Revision 3, January 2004.<sup>1</sup> The measures are annual rates, risk-adjusted for age and gender.

## Suggested Uses

1. Statewide quality assessment, e.g., statistically significant difference in state risk-adjusted rate than the national rate or changing trend data suggest high priority quality issues.
2. Hospitals can use AHRQ IQIs for case finding and priority setting for quality issues.
3. In some states, entities publish provider level inpatient quality information. Recent AHRQ document offers guidance.<sup>3</sup>

## Objectives

1. Report risk-adjusted rate by AHRQ IQI and year for Utah inpatient discharges in 1999-2003.
2. Compare the risk-adjusted rate for Utah inpatient discharges and the national rate from the AHRQ National Healthcare Quality Report (NHQR) 2001.<sup>2</sup>

## Results

**Table 1. Risk-Adjusted\* Rate by AHRQ Inpatient Quality Indicator and Year, Utah and Nation, Acute Care Hospital Discharges, 2001, 2003**

IQI Label	UT 2001	NHQR** 2001	P value	UT 2003	Comments
Pneumonia	72.8	84.7	0.001	61.6	Lowest in nation in 2001 decreased further in 2003
CABG Deaths	28.9	33.0	0.314	27.6	
Craniotomy Deaths	75.1	71.8	0.699	74.0	
Hip Replacement Deaths	2.9	2.9	0.990	2.7	
Bi-Lateral Cardiac Catheterization	94.7	80.1	0.000	97.9	Higher than nation in 2001, higher in 2003
AMI	108.9	99.1	0.047	95.9	Higher than nation in 2001 but decreased in 2003
CHF	49.7	44.7	0.195	32.3	
Stroke	105.8	113.6	0.187	96.7	
GI Hemorrhage	28.6	31.5	0.426	23.7	
Hip Fracture	28.4	29.6	0.761	25.5	
Cesarean Delivery	180.3	250.3	0.000	169.3	Lower than nation in 2001 but increased in 2003
VBAC, All	293.2	220.2	0.000	235.1	Higher than nation in 2001 but decreased in 2003
Laparoscopic Cholecystectomy	723.0	755.1	0.000	793.0	Lower than nation in 2001 but increased in 2003
Incidental Appendectomy, Elderly	20.2	25.2	0.115	13.7	
PTCA	16.7	14.4	0.212	13.3	
Carotid Endarterectomy	3.9	6.8	0.471	6.1	
AMI Without Transfer Cases	120.3	NA	NA	107.2	
Primary Cesarean Section	82.2	NA	NA	93.8	
VBAC, Uncomplicated	304.5	NA	NA	223.1	

Risk adjusted\* for age and gender.  
NHQR\*\* is National Healthcare Quality Report by Agency for Healthcare Quality and Research.  
It is based on the Statewide Inpatient Database, 2001.  
Utah data are from the Utah Department of Health Inpatient Hospital Discharge Database, 2001, 2003

## References

1. Agency for Healthcare Research and Quality (AHRQ) Inpatient Quality Indicators, Version 2.1, Revision 3, July 2004. <http://www.qualityindicators.ahrq.gov>
2. National Healthcare Quality Report, AHRQ, December, 2004.
3. Remus, D & Fraser, I. August, 2004, "Guidance for Using the AHRQ Quality Indicators for Hospital-level Public Reporting or Payment." AHRQ Publication No. 04-0086-EF. <http://www.qualityindicators.ahrq.gov>
4. AHRQ Quality Indicators—Guide to Inpatient Quality Indicators: Quality of Care in Hospitals—Volume, Mortality, and Utilization. Rockville, MD: Agency for Healthcare Research and Quality, 2002. AHRQ Pub. No. 02-RO204. Revision 2 (September 4, 2003)

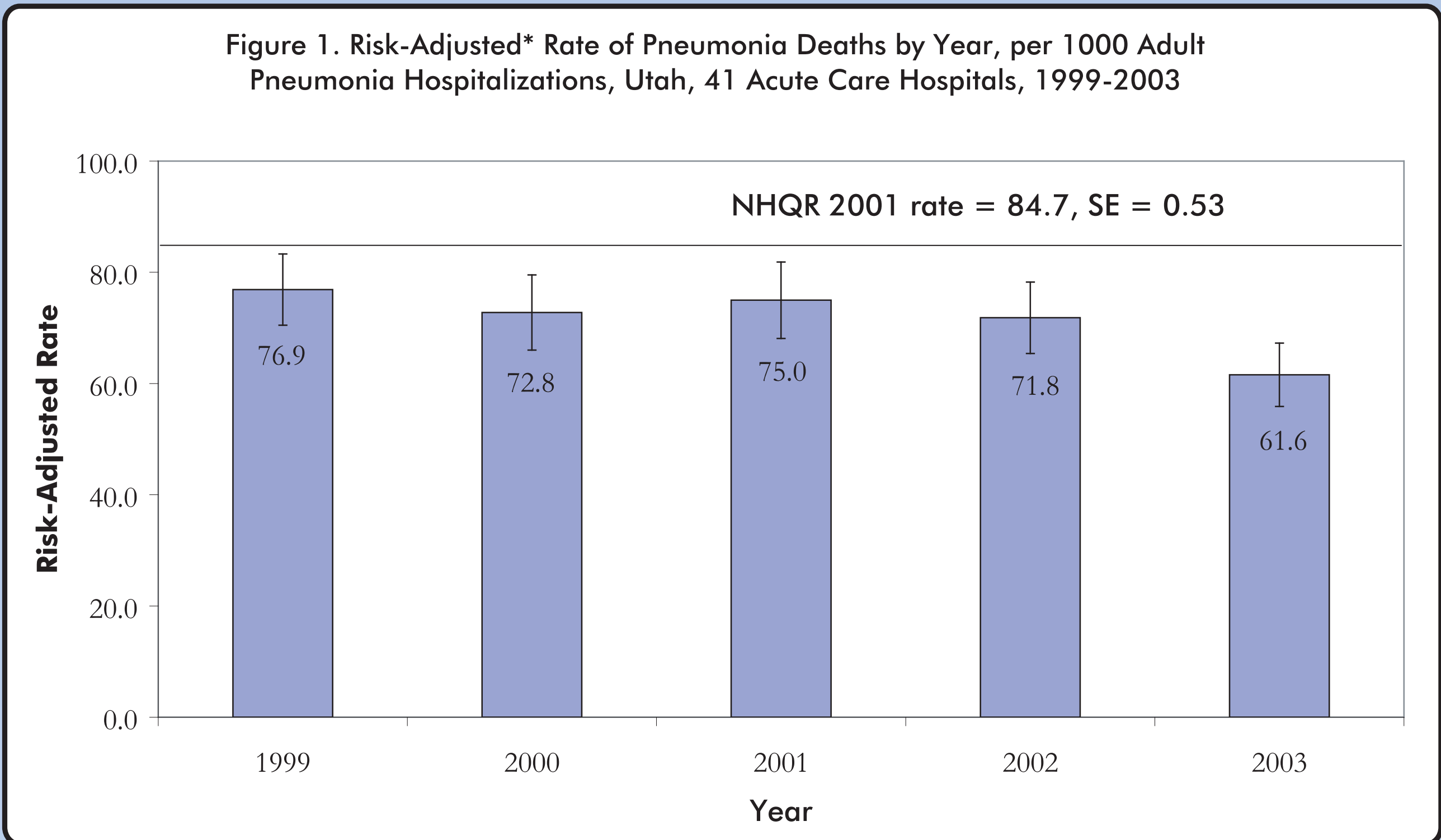


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## Good News!

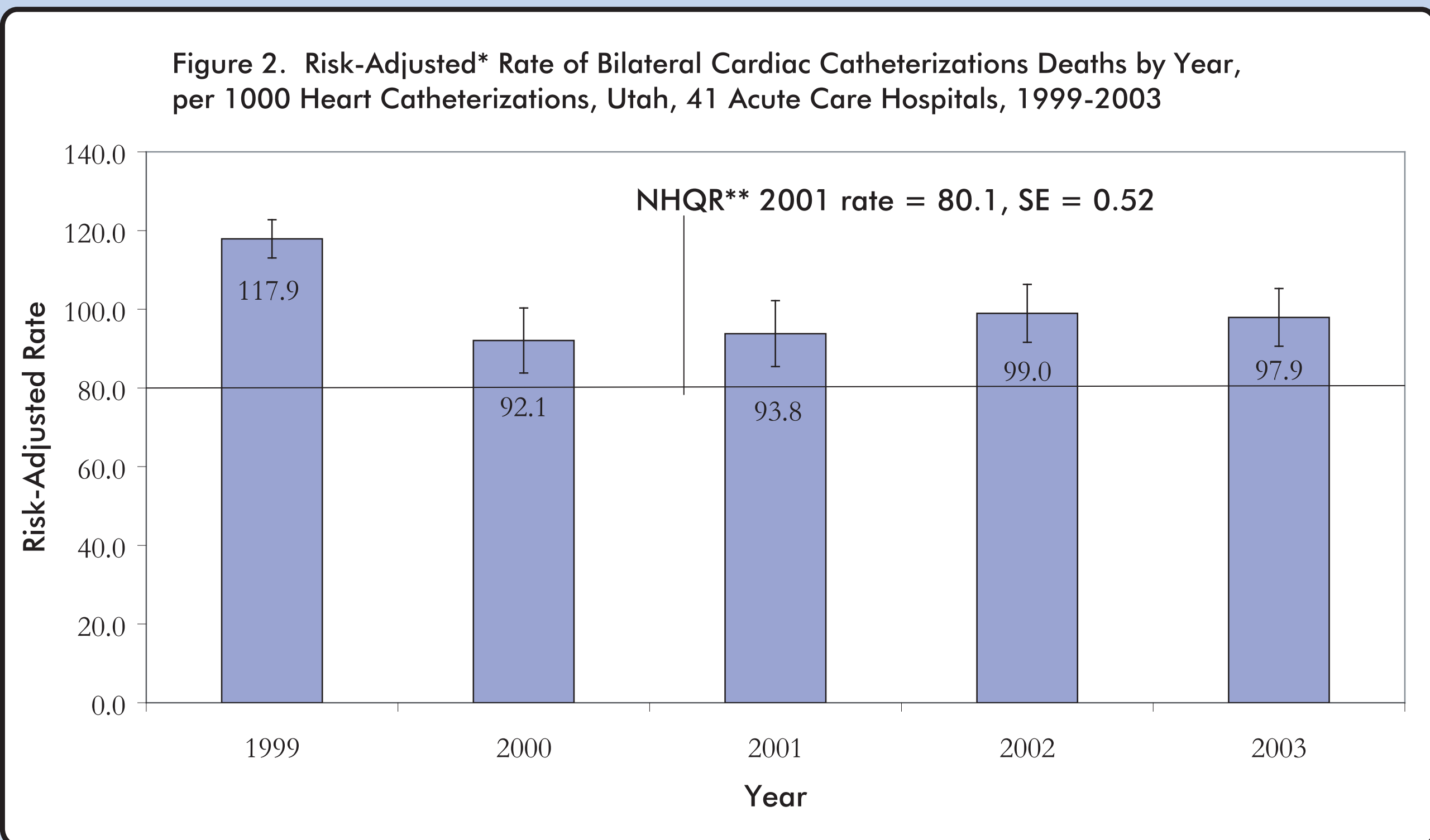
The annual Utah adult inpatient pneumonia death risk-adjusted rate was lower than the 2001 national rate<sup>2</sup> and continued to decrease after 2001.



Risk-adjusted\* for age and gender. NHQR\*\* is the National Healthcare Quality Report based on the AHRQ Statewide Inpatient Database, a national database. The rate is significantly lower than the NHQR 2001 in 1999 through 2003.

## Bad News!

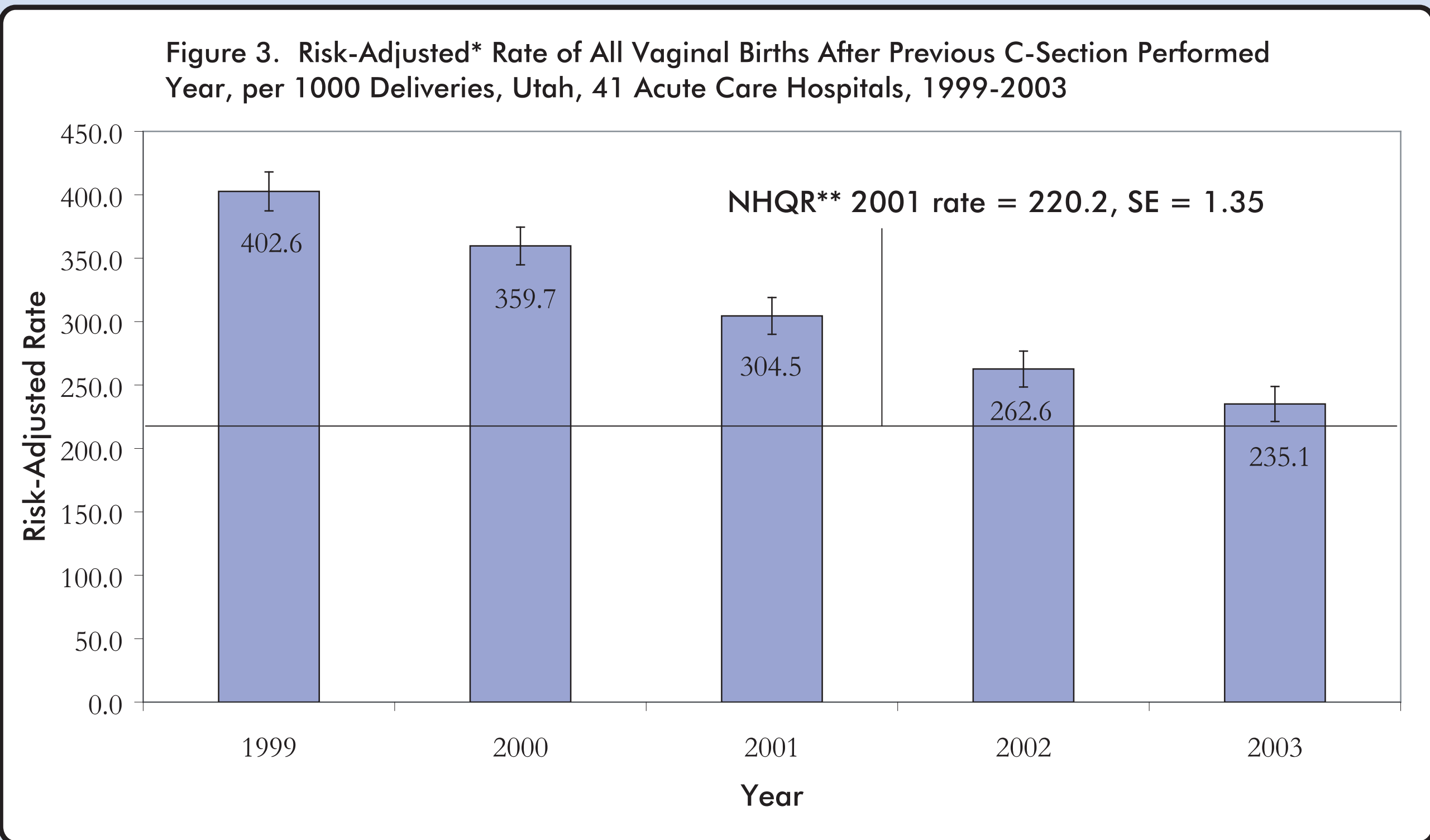
The annual Utah bilateral cardiac catheterization risk-adjusted rate was higher than the 2001 national rate.<sup>2</sup> Right-side coronary catheterization incidental to left-side catheterization has little additional benefit for patients without indications of right-side catheterization. Lower rates represent better quality.<sup>4</sup>



Risk-adjusted\* for age and gender. NHQR\*\* is the National Healthcare Quality Report based on the AHRQ Statewide Inpatient Database, a national database. The rate is significantly higher than the NHQR 2001 in 1999 through 2003.

## Good News Going Bad?

The annual Utah VBAC risk-adjusted rate was higher than the 2001 national rate.<sup>2</sup> However, by 2003 it was approaching the national rate.



Risk-adjusted\* for age and gender. NHQR\*\* is the National Healthcare Quality Report based on the AHRQ Statewide Inpatient Database, a national database. The Utah annual risk-adjusted rate is significantly lower in each year than the previous year from 2000 through 2003. The Utah annual rate also is significantly higher than the NHQR 2001 in 1999 through 2003. However, the Utah annual rate is rapidly approaching the NHQR 2001.